

## Supporting Information for:

# Plenty of Room to Crystallize: Swollen Lipidic Mesophases For Improved and Controlled in-meso Protein Crystallization

Alexandru Zabara,<sup>a</sup> Raffaele Mezzenga<sup>\*a</sup>

<sup>a</sup>*ETH Zurich*

*Food & Soft Materials Science*

*Schmelzbergstrasse 9, LFO, E23*

*8092 Zürich, SWITZERLAND*

*\*To whom the correspondence should be addressed: [raffaele.mezzenga@hest.ethz.ch](mailto:raffaele.mezzenga@hest.ethz.ch)*

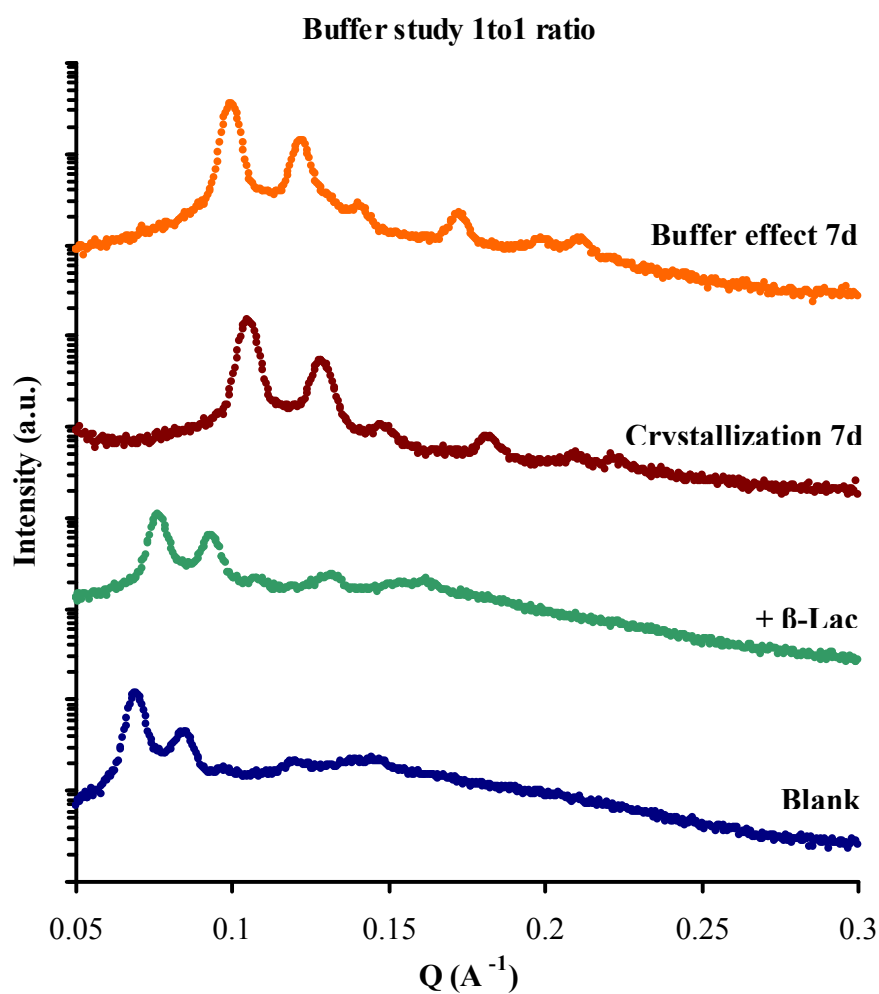


Fig. S1. 1D SAXS spectra showing the effect on the structure and symmetry of the hosting mesophase caused by: i) protein loading, ii) *in-meso* protein crystallization at a ratio of 1:1 (mesophase:crystallization buffer) after 7 days, iii) osmotic stress caused by the crystallization buffer alone (no protein) after 7 days.

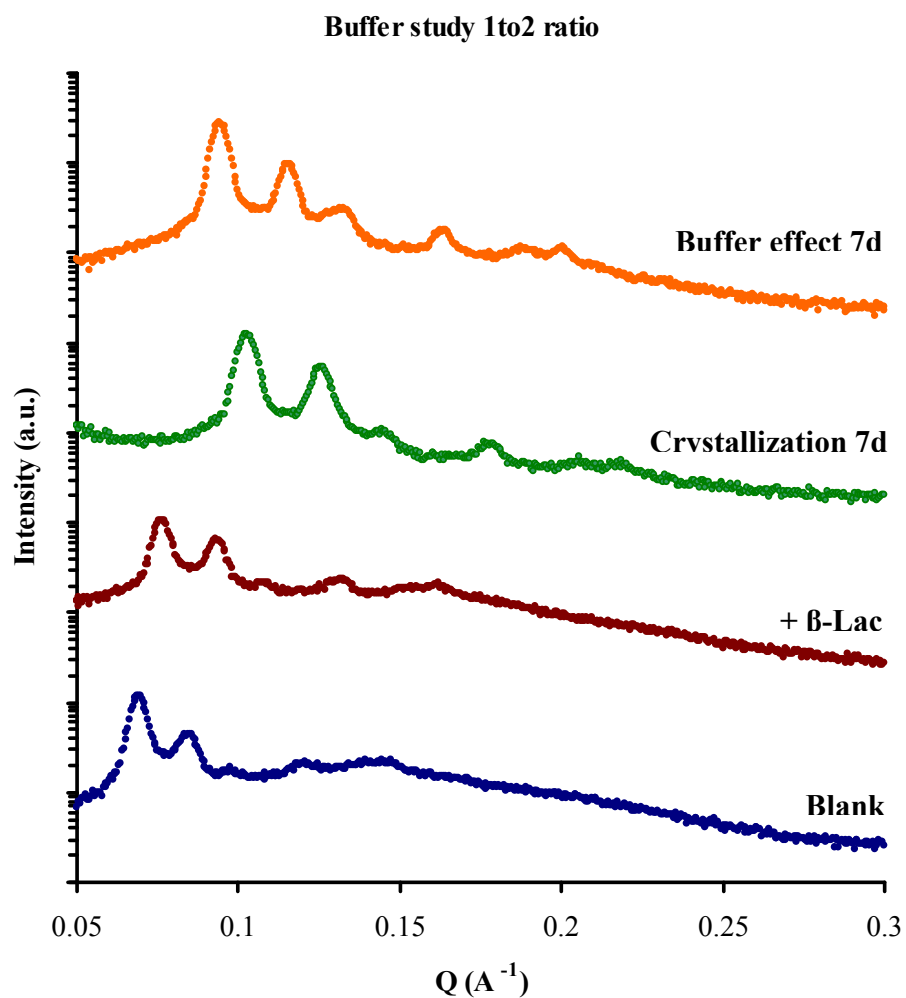


Fig. S2. 1D SAXS spectra showing the effect on the structure and symmetry of the hosting mesophase caused by: i) protein loading, ii) *in-meso* protein crystallization at a ratio of 2:1 (mesophase:crystallization buffer) after 7 days, iii) osmotic stress caused by the crystallization buffer alone (no protein) after 7 days.

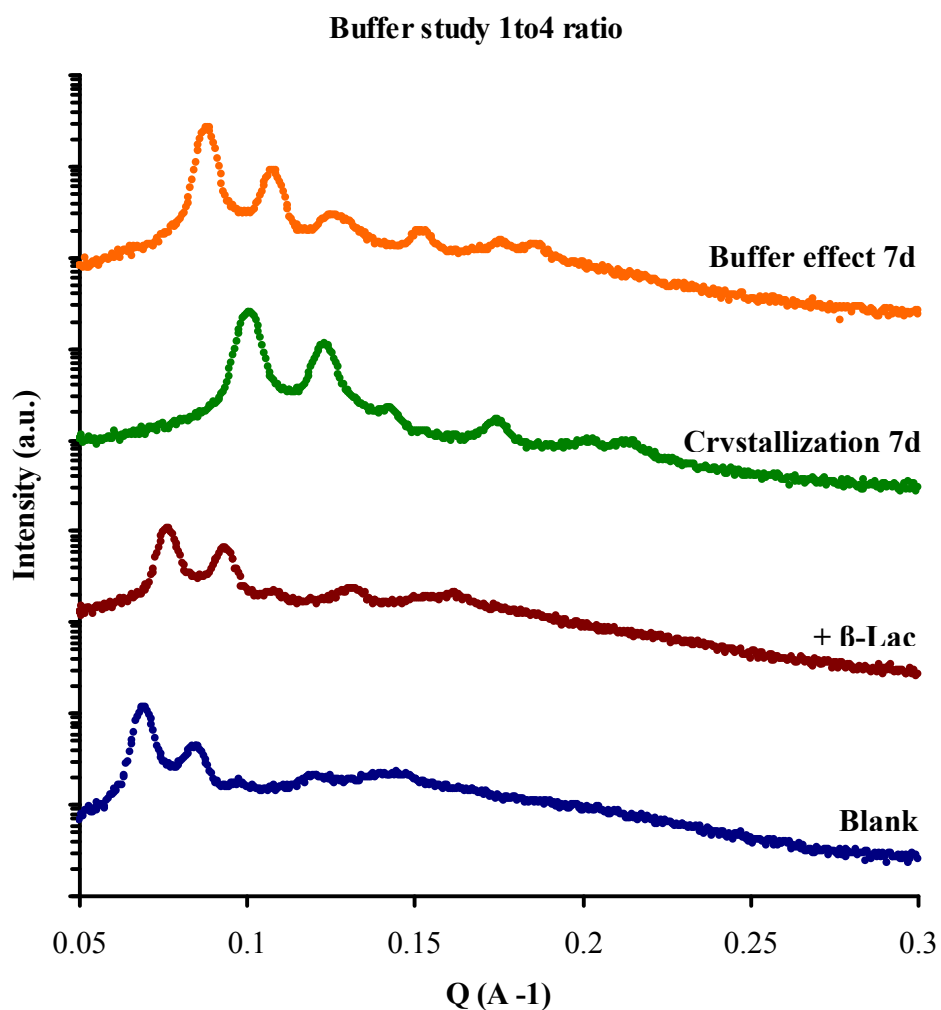


Fig. S3. 1D SAXS spectra showing the effect on the structure and symmetry of the hosting mesophase caused by: i) protein loading, ii) *in-meso* protein crystallization at a ratio of 4:1 (mesophase:crystallization buffer) after 7 days, iii) osmotic stress caused by the crystallization buffer alone (no protein) after 7 days.

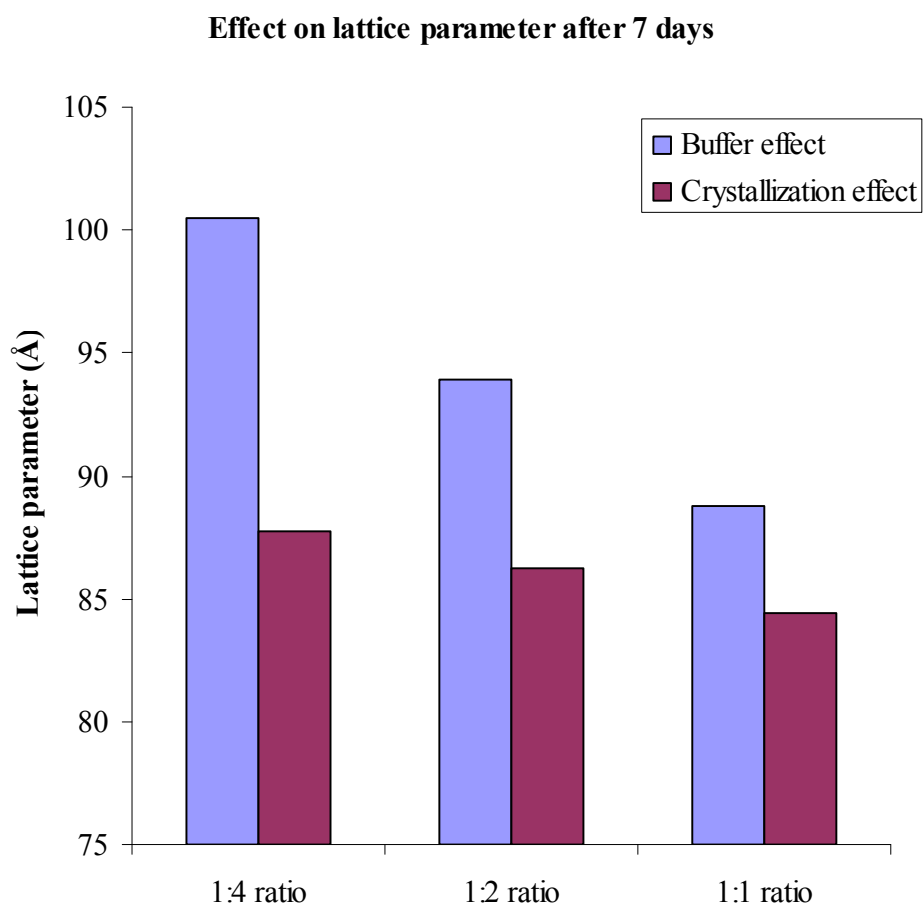


Fig. S4. Comparison between the lattice parameter of the mesophase under a) the buffer osmotic stress alone and b) in presence of proteins in the mesophase with simultaneous buffer osmotic stress during the *in-meso* crystallization process.